The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (original) A method for communicating data between a cordless power tool and a host device, said method comprising:

inserting the host device into a battery pack receptacle of the tool such that the host device is connected to at least one battery terminal of the tool;

entering a tool communications mode; and

transmitting data between the power tool and the host device.

2. (original) The method of Claim 1, wherein inserting the host device comprises inserting a removable battery pack including a communications circuit into the battery pack receptacle, wherein the battery pack is used to provide power to the tool during both the communications mode and a tool operational mode.

3. (original) The method of Claim 1, wherein transmitting data comprises varying at least one of a voltage and a current supplied by the host device to the tool between a first level and a second level to transmit data from the tool to the host device.

4. (original) The method of Claim 3, wherein varying a voltage supplied by the host device to the tool comprises sequentially alternating a voltage across a resistor in the tool between a first voltage and a second voltage.

5. (original) The method of Claim 4, wherein varying a voltage supplied by the host device to the tool further comprises sequentially alternating a voltage across a resistor in the host device between a first voltage and a second voltage as a result of sequentially alternating the voltage across the tool resistor.

6. (original) The method of Claim 5, wherein varying a voltage supplied by the host device to the tool further comprises resolving the sequentially alternating voltage across the host device resistor into digital signals representative of the data transmitted from the tool to the host device.

7. (original) The method of Claim 6, wherein varying a voltage supplied by the host device to the tool further comprises storing the data transmitted from the tool to the host device in a data reader.

8. (original) The method of Claim 1, wherein transmitting data comprises shifting a voltage signal to a microcontroller of the tool between a first voltage and a second voltage to transmit data from the host device to the tool.

9. (original) The method of Claim 8, wherein shifting a voltage signal to a microcontroller comprises sequentially switching a voltage supplied from the host device to the tool between a first voltage and a second voltage.

10. (original) The method of Claim 9, wherein shifting a voltage signal to a microcontroller further comprises resolving the sequentially switching voltage supplied from the host device to the tool into digital signals representative of the data transmitted from the host device to the tool.

11. (original) The method of Claim 10, wherein shifting a voltage signal to a microcontroller further comprises:

inputting the digital signals to the microcontroller; and

storing the transmitted data in a tool memory device.

12. (original) The method of Claim 1, wherein transmitting data comprises:

varying at least one of a voltage and a current supplied by the host device to the tool between a first level and a second level to transmit data from the tool to the host device; and

shifting a voltage signal to a microcontroller of the tool between a first voltage and a second voltage to transmit data from the host device to the tool.

13. (original) The method of Claim 1, wherein entering a communications mode comprises determining whether a power level provided by the host device to the tool is less than a predetermined threshold.

14. (original) The method of Claim 13, wherein entering a communications mode further comprises entering the communications mode if the power level is less than the threshold.

15. (original) The method of Claim 1, wherein inserting the host device comprises inserting a connector of the host device into the battery pack receptacle, wherein the connector is shaped substantially similar to the removable battery pack and communicatively linked to a communications circuit of the host device.

16. (original) A method of downloading data from a cordless power tool to a data receiving device, said method comprising:

removing a battery pack from the power tool;

connecting the data receiving device to the power tool in substantially the same manner as the battery pack is connected in the power tool, thereby connecting the data receiving device to at least one power terminal of the power tool used for connecting the tool to the battery pack during operation of the tool;

sequentially alternating at least one of a voltage and a current supplied by the data receiving device to the tool between a first level and a second level to transmit data from the tool to the data receiving device; and

storing the data transmitted from the tool to the data receiving device in a data reader.

17. (original) The method of Claim 16, wherein sequentially alternating a voltage supplied by the data receiving device to the tool comprises sequentially alternating a voltage across a resistor in the tool between a first voltage and a second voltage.

18. (original) The method of Claim 12, wherein sequentially alternating a voltage supplied by the data receiving device to the tool further comprises sequentially alternating a voltage across a resistor in the data receiving device between a first voltage and a second voltage as a result of sequentially alternating the voltage across the tool resistor.

19. (original) The method of Claim 18, wherein sequentially alternating a voltage supplied by the data receiving device to the tool further comprises resolving the sequentially alternating voltage across the data receiving device resistor into digital signals representative of the data transmitted from the tool to the data receiving device.

20. (original) The method of Claim 19, wherein storing the data transmitted from the tool to the data receiving device comprises:

transmitting the digital signals to the data reader; and

storing the data in a memory device of the data reader.

21. (original) A method of uploading data from a programming device to a cordless power tool, said method comprising:

removing a battery pack from the power tool;

connecting the programming device to the power tool in substantially the same manner as the battery pack is connected in the power tool, thereby connecting the programming device to at least one power terminal of the tool used for connecting the tool to a power supply during operation of the tool;

sequentially alternating a voltage signal to a microcontroller of the tool between a first level and a second level to transmit data from the programming device to the tool; and

storing the data transmitted from the programming device to the tool in a memory device of the tool.

22. (original) The method of Claim 21, wherein sequentially alternating a voltage signal to a microcontroller comprises sequentially switching a voltage supplied from the programming device to the tool between a first voltage and a second voltage.

23. (original) The method of Claim 22, wherein sequentially alternating a voltage signal to a microcontroller further comprises resolving the sequentially switching voltage supplied from the programming device to the tool into digital signals representative of the data transmitted from the programming device to the tool.

24. (original) The method of Claim 23, wherein storing the data transmitted from the programming device to the tool comprises inputting the digital signals to the microcontroller.

25. (original) A system for communicating data to and from a cordless power tool, said system comprising:

a host device adapted to be interchangeable with a removable battery pack of the tool such that the host device is connected to at least one power terminal of the tool, wherein the battery pack is used to power the power tool during operation of the power tool;

a first communications circuit included in the tool adapted to vary a voltage supplied by the host device to the tool between a first level and a second level to transmit data from the tool to the host device; and

a second communications circuit included in the host device adapted to vary a voltage signal to a microcontroller of the tool between a first level and a second level to transmit data from the host device to the tool.

26. (original) The system of Claim 25, wherein, the first communications circuit includes a first resistor and microcontroller adapted to sequentially alternate a voltage across the first resistor between a first voltage and a second voltage.

27. (original) The system of Claim 26, wherein the second communications circuit includes a second resistor, wherein a voltage across the second resistor is sequentially alternated between a first voltage and a second voltage as a result of the sequentially alternating voltage across the first resistor.

28. (original) The system of Claim 27, wherein the second communications circuit further includes a differential circuit adapted to resolve the sequentially alternating voltage across the second resistor into digital signals representative of the data transmitted from the tool to the host device.

29. (original) The system of Claim 28, wherein the second communications circuit further includes a memory device and a data reader adapted to receive the digital signals and store the data in the memory device.

30. (original) The system of Claim 28, wherein the second communications circuit is further adapted to connect to a remote computer device adapted to receive the digital signals and store the data.

31. (original) The system of Claim 25, wherein the second communications circuit includes a voltage shifting device adapted to sequentially switch a voltage supplied from the second communications circuit to the first communications circuit between a first voltage and a second voltage.

32. (original) The system of Claim 31, wherein the first communications circuit includes a voltage shift detection circuit adapted to resolve the sequentially switching voltage supplied from the second communications circuit to the first communications circuit into digital signals representative of the data transmitted from the host device to the tool.

33. (original) The system of Claim 32, wherein the first communications circuit further includes a memory device, wherein the microcontroller is adapted to receive the digital signals and store the data represented thereby in the memory device.

34. (original) The system of Claim 25, wherein the host device comprises a removable battery pack that includes the second communications circuit.

35. (original) The system of Claim 25, wherein the host device comprises a connector communicatively linked to a computer based device including a communications circuit, the connector shaped substantially similar to the battery pack.

36. (original) The system of Claim 26, wherein the microcontroller is further adapted to determine if a power supplied by the second communications circuit to the first communications circuit is less than a predetermined threshold level.

37. (original) The system of Claim 36, wherein the microcontroller is further adapted to enter a communications mode if the power level is less than the predetermined level.

38. (original) A cordless power tool adapted to communicate with a data transfer device, said tool comprising:

a removable battery pack used to power the tool when the tool is in an operation mode;

a battery pack receptacle adapted to interchangeably retain either the battery pack or a data transfer device;

at least one power terminal within the receptacle adapted to connect to the battery pack when the tool is the operation mode and to the data transfer device when the tool is in a communications mode; and

a first communications circuit housed within the power tool and connected to the power terminal, the first communications circuit adapted to communicate with the data transfer device over the power terminal.

39. (original) The tool of Claim 38, wherein the first communications circuit is further adapted to sequentially vary a voltage across a resistor in the data transfer device between a first level and a second level to transmit data from the tool to the data transfer device.

40. (original) The tool of Claim 39, wherein, the first communications circuit includes a microcontroller adapted to sequentially alternate a voltage across a resistor in the first communications circuit between a first voltage and a second voltage, thereby sequentially varying the voltage across the resistor in the data transfer device to transmit the data from the tool to the data transfer device.

41. (original) The tool of Claim 40, wherein the first communications circuit further includes a memory device, and wherein the microcontroller is adapted to receive the digital signals and store the data represented thereby in the memory device.

42. (original) The tool of Claim 38, wherein the first communications circuit is further adapted to receive a voltage from the data transfer device that is sequentially shifted between a first voltage and a second voltage to transmit data from the data transfer device to the tool.

43. (original) The tool of Claim 42, wherein the first communications circuit further includes a voltage shift detection circuit adapted to resolve the sequentially shifted voltage received from the data transfer device into digital signals representative of the data transmitted from the host device to the tool.

44. (original) The tool of Claim 38, wherein the host device comprises a removable battery pack that includes a second communications circuit.

45. (original) The tool of Claim 38, wherein the host device comprises a connector communicatively linked to a computer based device including a communications circuit, the connector shaped substantially similar to the battery pack.

46. (original) The tool of Claim 40, wherein the microcontroller is further adapted to determine if a power supplied by a second communications circuit to the first communications circuit is less than a predetermined threshold level, the second communications circuit included in the host device.

47. (original) The tool of Claim 46, wherein the microcontroller is further adapted to enter a communications mode if the power level is less than the predetermined level.

48. (original) The tool of Claim 38, wherein the communications circuit is further adapted to:

sequentially vary a voltage across a resistor in the data transfer device between a first level and a second level to transmit data from the tool to the data transfer device; and

receive a voltage from the data transfer device that is sequentially shifted between a first voltage and a second voltage to transmit data from the data transfer device to the tool.

49. (original) A method for communicating data between a cordless power tool and a host device, said method comprising:

inserting the host device into a battery pack receptacle of the power tool such that the host device is connected to at least one battery terminal of the tool, wherein the battery pack receptacle is adapted to retain a removable battery pack during a tool operational mode;

determining whether a power level provided by the host device to the tool is less than a predetermined threshold;

entering a communications mode if the power level is less than the threshold; and

transmitting data between the power tool and the host device upon entering the communications mode.

50. (original) The method of Claim 49, wherein inserting the host device comprises inserting a removable battery pack including a communications circuit into the battery pack receptacle, wherein the battery pack is used to provide power to the tool during the tool operation mode.

51. (original) The method of Claim 49, wherein inserting the host device comprises inserting a connector of the host device into the battery pack receptacle, wherein the connector is shaped substantially similar to the removable battery pack and communicatively linked to a communications circuit of the host device.

52. (original) The method of Claim 49, wherein transmitting data comprises immediately downloading data from the tool to the host device upon entering the communications mode.

53. (original) The method of Claim 49, wherein transmitting data comprises immediately uploading data from the host device to the tool upon entering the communications mode.

54. (original) The method of Claim 49, wherein transmitting data comprises immediately exchanging bidirectional data transmissions between the host device and the tool upon entering the communications mode.

55. (original) The method of Claim 49, wherein transmitting data comprises suspending the transmission of data if the operational mode of the tool is activated.

56. (original) A method for communicating data between a cordless power tool and a host device, where the cordless power tool has a receptacle with a power terminal connection, a removable battery pack adapted to attach to the receptacle to make electrical connection with the power terminal connection, and an internal module in communication with the power terminal connection, the method comprising:

removing the battery pack from the receptacle of the tool;

coupling at least a portion of a host device to the power terminal connection of the tool; and

using the host device to facilitate transmission of information between the host device and the module in the tool.

57. (original) The method of Claim 56, wherein coupling a portion of the host device to the power terminal connection comprises inserting the host device into the receptacle, wherein the host device is shaped substantially similar to the battery pack.

58. (original) The method of Claim 57, wherein inserting the host device comprises inserting a removable battery pack including a communications circuit into the battery pack receptacle, wherein the battery pack is used to provide power to the tool during the tool operation mode.

59. (original) The method of Claim 58, wherein inserting the host device comprises inserting a connector of the host device into the battery pack receptacle, wherein the connector is shaped substantially similar to the removable battery pack and communicatively linked to a communications circuit of the host device.